

**Amendments to the Claims:**

Please cancel Claims 4, 22, 33, 67, 74, and 82 and amend Claims 1, 3, 5-6, 8-9, 14-21, 23-24, 26-32, 34-35, 36-43, 45, 47-52, 65, 68-73, 75-81, and 83-85 as follows:

1. (currently amended) A method for providing product availability information to a user from at least one product source, where use of a product may begin on one of a plurality of different start dates, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

receiving a product availability request from a user concerning a selected product;

accessing the information prestored in the storage device for the selected product; and

determining the availability of the selected product based on at least the availability information prestored in the storage device; and

updating availability information in the storage device for the product for start dates of the product that occur sooner in time than for start dates of use that occur later in time.

2. (original) A method according to Claim 1, wherein said accessing and storing steps access a plurality of product sources, requests product availability information concerning at least one product, and store the product availability information for the at least one product from each product source in the storage device.

3. (currently amended) A method according to Claim 1, wherein said updating step updates further comprising updating the product availability information stored in the storage device by accessing the product sources, requesting availability information about the product, and storing the product availability information in the storage device.

4. (canceled).

5. (currently amended) A method according to Claim 1 4, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said updating step uses a decaying exponential function to determine determines which start dates ~~of use~~ to update the availability information in the storage device for ~~by using a decaying exponential function to define the start dates to be updated~~, such that start dates ~~of use~~ that occur sooner in time are updated more often than start dates ~~of use~~ that occur later in time.

6. (currently amended) A method according to Claim 1 4, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said updating step determines which start dates ~~of use~~ to update the availability information for in the storage device by using the following function:

Start Date =  $N^{(\log \text{day}/\log \text{length})}$

where

Start Date = date to be queried

$N$  = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

7. (original) A method according to Claim 6, wherein said function generates a list of numbers, wherein said method further comprises adding each number in the list to said current date to determine the product availability for which start dates should be updated by said updating step in the storage device.

8. (currently amended) A method according to Claim 1, wherein the product can be used beginning on a particular start date ~~of use~~ and may be used for different lengths of use, wherein for each length of use for each start date said accessing and storing steps access product sources, requests availability information concerning the product for the particular start date of use and length of use, and stores the availability information in the storage device.

9. (currently amended) A method according to Claim 8, further comprising updating availability information in the storage device more often for start dates that occur sooner in time

~~than for start dates that occur later in time;~~ wherein for each start date, said updating step updates the product availability information for each length of use associated with the start date.

10. (original) A method according to Claim 3, wherein the storage device comprises product availability information from a plurality of product sources, wherein said method further comprises providing a score for each product source based at least on a popularity of the product source, and said updating step comprises updating the availability information stored in the storage device for each product source based on the score associated with each product source.

11. (original) A method according to Claim 10, wherein said updating step updates product availability for product sources having higher scores more than product sources having lower scores.

12. (original) A method according to Claim 10, wherein said updating step performs a selected number of updates of product source information for a given update session, said updating step assigns more updates to product sources having higher scores than to product sources having lower scores.

13. (original) A method according to Claim 12, wherein a minimum number of updates are performed on each product source independent of the product source's associated score.

14. (currently amended) A method according to Claim 1, wherein the product can be used beginning on a particular start date of use and may be used for different lengths of use from the start date, and wherein said storing step only stores product availability information for a maximum number of lengths of use for each start date.

15. (currently amended) A method according to Claim 14, wherein said receiving, accessing, and determining steps comprise:

receiving an availability request from a user concerning a selected product for a given start date and length of use;

accessing the information prestored in the storage device for the selected product; and

determining the availability of the selected product based on the selected start date and length of use from the availability information prestored in the storage device.

16. (currently amended) A method according to Claim 15, wherein when the length of use for a product exceeds ~~a~~ the maximum length of use stored in the storage device, said determining step comprises:

dividing the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in the storage device, ~~and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use; and~~

determining the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

17. (currently amended) A method according to Claim 16, wherein said dividing step divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use is at least two days covers at least two dates.

18. (currently amended) A method according to Claim 16, wherein said dividing step creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use say, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

19. (currently amended) A method according to Claim 16, wherein said dividing step creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, ~~and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use~~, said dividing step using the following function to create the scenarios:

- 1) If LOS modulo X = 0  
where

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LOS = length of use of request  
x X = maximum length of use stored in the cache

Then

*Scenario 1 : A, B, C*

$$A = x/2$$

$$B = \sum_1^{\text{int}(LOS - (x/2))/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 :*

$$= \sum_1^{\text{int}(LOS/x)} x$$

2) If LOS modulo x X > 0

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_1^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

20. (currently amended) A system for providing product availability information to a user from at least one product source, where use of a product may begin on one of a plurality of different start dates, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element:

accesses at least one product source and requests product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

stores the product availability information received from the product source in said storage device;

receives a product availability request from a user concerning a selected product;  
accesses the information prestored in the storage device for the selected product; and  
determines the availability of the selected product based on at least the availability information prestored in the storage device; and

updates availability information in the storage device for start dates of the product that occur sooner in time than for start dates of use that occur later in time.

21. (currently amended) A system according to Claim 20, wherein said processing element further updates the product availability information stored in the storage device by accessing the product sources, requesting availability information about the product, and storing the product availability information in the storage device.

22. (canceled).

23. (currently amended) A system according to Claim 21 22, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said processing element uses a decaying exponential function to determine determines which start dates of use to update the availability information in the storage device for by using a decaying exponential function to define the start dates to be updated, such that start dates of use that occur sooner in time are updated more often than start dates of use that occur later in time.

24. (currently amended) A system according to Claim 21 22, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said processing element determines which start dates of use to update the availability information for in the storage device by using the following function:

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Start Date =  $N^{(\log \text{day}/\log \text{length})}$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

25. (original) A system according to Claim 21, wherein said storage device comprises product availability information from a plurality of product sources, wherein said processing element provides a score for each product source based at least on a popularity of the product source and updates the availability information stored in said storage device for each product source based on the score associated with each product source.

26. (currently amended) A system according to Claim 20, wherein the product can be used beginning on a particular start date of use and may be used for different lengths of use from the start date, and wherein said processing element stores product availability information for a maximum number of lengths of use for each start date.

27. (currently amended) A system according to Claim 26, wherein when the length of use for a product exceeds a the maximum length of use stored in the storage device, said processing element:

divides the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in said storage device; ~~and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use;~~ and

determines the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

28. (currently amended) A system according to Claim 27, wherein said processing element divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use is at least two days covers at least two dates.

29. (currently amended) A system according to Claim 27, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

30. (currently amended) A system according to Claim 27, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, said processing element uses the following function to create the scenarios:

1) If  $\text{LOS} \bmod \underline{x} = 0$

where

$\text{LOS}$  = length of use of request

$\underline{x}$   $\mathbb{X}$  = maximum length of use stored in the cache

Then

*Scenario 1 : A, B, C*

$$A = \underline{x}/2$$

$$B = \sum_{1}^{\text{int}(\text{LOS} - (\underline{x}/2))/\underline{x}} \underline{x}$$

$$C = \text{LOS} - (A + B)$$

*Scenario 2 :*

$$= \sum_{1}^{\text{int}(\text{LOS}/\underline{x})} \underline{x}$$

2) If  $\text{LOS} \bmod \underline{x} > 0$

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_{1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

31. (currently amended) A computer program product for providing product availability information to a user from at least one product source, where use of a product may begin on one of a plurality of different start dates, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for receiving a product availability request from a user concerning a selected product;

fourth computer-readable program code means for accessing the information prestored in the storage device for the selected product; and

fifth computer-readable program code means for determining the availability of the selected product based on at least the availability information prestored in the storage device; and.

sixth computer-readable program code means for updating availability information in the storage device for start dates of the product that occur sooner in time than for start dates that occur later in time.

32. (currently amended) A computer program product according to Claim 31, wherein said further comprising sixth computer-readable program code means updates for updating the

product availability information stored in the storage device by accessing the product sources, requesting availability information about the product, and storing the product availability information in the storage device.

33. (canceled).

34. (currently amended) A computer program product according to Claim 31 33, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said sixth computer-readable program code means determines which start dates ~~of use~~ to update the availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{day}/\log \text{length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

35. (original) A computer program product according to Claim 32, wherein the storage device comprises product availability information from a plurality of product sources, wherein said computer readable medium further comprises seventh computer-readable code means for providing a score for each product source based at least on a popularity of the product source, and said sixth computer-readable codes means updates the availability information stored in the storage device for each product source based on the score associated with each product source.

36. (currently amended) A computer program product according to Claim 31, wherein the product can be used beginning on a particular start date ~~of use~~ and may be used for different lengths of use from the start date, and wherein said second computer-readable program code means only stores product availability information for a maximum number of lengths of use for each start date.

37. (currently amended) A computer program product according to Claim 36, wherein when the length of use for a product exceeds ~~a~~ the maximum length of use stored in the storage device, said fifth computer-readable program code means:

divides the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in the storage device, ~~and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use; and~~

determines the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

38. (currently amended) A computer program product according to Claim 37, wherein said fifth computer-readable program code means divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use ~~includes at least two days covers at least two dates.~~

39. (currently amended) A computer program product according to Claim 37, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of ~~use say, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use,~~ and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

40. (currently amended) A computer program product according to Claim 37, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, ~~and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use,~~ said fifth computer-readable program code means uses the following function to create the scenarios:

1) If LOS modulo  $\underline{X} = 0$

where

LOS = length of use of request

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x  $\underline{X}$  = maximum length of use stored in the cache

Then

*Scenario 1 : A, B, C*

$$A = x / 2$$

$$B = \sum_{1}^{\text{int}(LOS-(x/2))/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 :*

$$= \sum_{1}^{\text{int}(LOS/x)} x$$

2) If LOS modulo x  $\underline{X} > 0$

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_{1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

41. (currently amended) A method for providing product availability information to a user from at least one product source, where use of a product may begin be used on one of a plurality of different start dates, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product for different start dates ~~ef use~~ prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

determining the availability of a requested product by a user based on at least the availability information prestored in the storage device; and

updating availability information in the storage device for start dates ~~of use~~ of the product that occur sooner in time than for start dates ~~of use~~ that occur later in time.

42. (currently amended) A method according to Claim 41, wherein said updating step uses a decaying exponential function to determine ~~determines~~ which start dates ~~of use~~ to update the availability information in the storage device for ~~by using a decaying exponential function to define the start dates to be updated~~, such that start dates ~~of use~~ that occur sooner in time are updated more often than start dates ~~of use~~ that occur later in time.

43. (currently amended) A method according to Claim 41, wherein said updating step determines which start dates ~~of use~~ to update the availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{day}/\log \text{length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

44. (original) A method according to Claim 43, wherein said function generates a list of numbers, wherein said method further comprises adding each number in the list to said current date to determine the product availability for which start dates should be updated by said updating step in the storage device.

45. (currently amended) A method according to Claim 41, wherein the product can be used beginning on a particular start date ~~of use and may be used~~ for different lengths of use, wherein for each length of use for each start date said accessing and storing steps access product sources, requests availability information concerning the product for the particular start date of use and length of use, and stores the availability information in the storage device.

46. (original) A method according to Claim 45, further comprising updating availability information in the storage device more often for start dates that occur sooner in time than for start dates that occur later in time, wherein for each start date, said updating step updates the product availability information for each length of use associated with the start date.

47. (currently amended) A system for providing product availability information to a user from at least one product source, where use of a product may begin be used on one of a plurality of different start dates, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element:

accesses at least one product source and requests product availability information concerning at least one product for different start dates ~~of use~~ prior to receipt of a product availability request from a user concerning the product;

stores the product availability information received from the product source in said storage device;

determines the availability of a requested product by a user based on at least the availability information prestored in said storage device; and

updates availability information in the storage device for start dates ~~of use~~ of the product that occur sooner in time than for start dates ~~of use~~ that occur later in time.

48. (currently amended) A system according to Claim 47, wherein said processing element uses a decaying exponential function to determine determines which start dates ~~of use~~ to update the availability information in the storage device for ~~by using a decaying exponential function to define the start dates to be updated~~, such that start dates ~~of use~~ that occur sooner in time are updated more often than start dates ~~of use~~ that occur later in time.

49. (currently amended) A system according to Claim 47, wherein said processing element determines which start dates ~~of use~~ to update the availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{day}/\log \text{length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

50. (currently amended) A computer program product for providing product availability information to a user from at least one product source, where use of a product may begin be used on one of a plurality of different start dates, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product for different start dates ~~of use~~ prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for determining the availability of a requested product by a user based on at least the availability information prestored in the storage device; and

fourth computer-readable program code means for updating availability information in the storage device for start dates ~~of use~~ of the product that occur sooner in time than for start dates ~~of use~~ that occur later in time.

51. (currently amended) A computer program product according to Claim 50, wherein said fourth computer-readable program code means uses a decaying exponential function to

determine ~~determines~~ which start dates ~~of use~~ to update the availability information in the storage device for ~~by using a decaying exponential function to define the start dates to be updated~~, such that start dates ~~of use~~ that occur sooner in time are updated more often than start dates ~~of use~~ that occur later in time.

52. (currently amended) A computer program product according to Claim 50, wherein said fourth computer-readable program code means determines which start dates ~~of use~~ to update the availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{day}/\log \text{length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

53. (original) A method for providing product availability information to a user from at least two product sources, said method comprising:

accessing the at least two product sources and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product sources in a storage device;

determining the availability of a requested product by a user based on at least the availability information prestored in the storage device;

providing a score for each product source based at least on a popularity of the product source; and

updating the availability information stored in the storage device for each product source based on the score associated with each product source.

54. (original) A method according to Claim 53, wherein said updating step updates product availability for product sources having higher scores more than product sources having lower scores.

55. (original) A method according to Claim 53, wherein said updating step performs a selected number of updates of product source information for a given update session, said updating step assigns more updates to product sources having higher scores than to product sources having lower scores.

56. (original) A method according to Claim 55, wherein a minimum number of updates are performed on each product source independent of the product source's associated score.

57. (original) A system for providing product availability information to a user from at least two product sources, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element:

accesses the at least two product sources and requests product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

stores the product availability information received from the product sources in a storage device;

determines the availability of a requested product by a user based on at least the availability information prestored in the storage device;

provides a score for each product source based at least on a popularity of the product source; and

updates the availability information stored in the storage device for each product source based on the score associated with each product source.

58. (original) A system according to Claim 57, wherein said processing element updates product availability for product sources having higher scores more than product sources having lower scores.

59. (original) A system according to Claim 57, wherein said processing element performs a selected number of updates of product source information for a given update session and assigns more updates to product sources having higher scores than to product sources having lower scores.

60. (original) A system according to Claim 59, wherein a minimum number of updates are performed on each product source independent of the product source's associated score.

61. (original) A computer program product for providing product availability information to a user from at least two product sources, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing the at least two product sources and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product sources in a storage device;

third computer-readable program code means for determining the availability of a requested product by a user based on at least the availability information prestored in the storage device;

fourth computer-readable program code means for providing a score for each product source based at least on a popularity of the product source; and

fifth computer-readable program code means for updating the availability information stored in the storage device for each product source based on the score associated with each product source.

62. (original) A computer program product according to Claim 61, wherein said fifth computer-readable program code means updates product availability for product sources having higher scores more than product sources having lower scores.

63. (original) A computer program product according to Claim 61, wherein said fifth computer-readable program code means performs a selected number of updates of product source information for a given update session, said fourth computer-readable program code means assigns more updates to product sources having higher scores than to product sources having lower scores.

64. (original) A computer program product according to Claim 63, wherein a minimum number of updates are performed on each product source independent of the product source's associated score.

65. (currently amended) A method for providing product availability information to a user from at least one product source, where a product may be used on different start dates and for different lengths of use from the start date, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

receiving a product availability request from a user concerning a selected product;  
accessing the information prestored in the storage device for the selected product; and  
determining the availability of the selected product based on at least the availability information prestored in the storage device,

wherein said storing step only stores product availability information for a maximum number of lengths of use for each start date,

wherein when the length of use for a product exceeds a maximum length of use stored in the storage device, said determining step comprises:

dividing the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in the storage device; and

determining the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

66. (original) A method according to Claim 65, wherein said receiving, accessing, and determining steps comprise:

receiving an availability request from a user concerning a product for a given start date and length of use;

accessing the information prestored in the storage device for the selected product; and

determining the availability of the product based on the selected start date and length of use from the availability information prestored in the storage device.

67. (canceled).

68. (currently amended) A method according to Claim 65 ~~67~~, wherein said dividing step divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use includes at least two days ~~covers at least two dates~~.

69. (currently amended) A method according to Claim 65 ~~67~~, wherein said dividing step creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use, ~~say, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use,~~ and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

70. (currently amended) A method according to Claim 65 ~~67~~, wherein said dividing step creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, ~~and have start dates and lengths~~

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of use that collectively correspond to the dates covered by the requested start date and length of use, said dividing step using the following function to create the scenarios:

1) If LOS modulo  $\underline{x} \times = 0$

where

LOS = length of use of request

$\underline{x} \times$  = maximum length of use stored in the cache

Then

*Scenario 1 : A, B, C*

$$A = x / 2$$

$$B = \sum_{1}^{\text{int}(LOS-(x/2))/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 :*

$$= \sum_{1}^{\text{int}(LOS/x)} x$$

2) If LOS modulo  $\underline{x} \times > 0$

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_{1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

71. (currently amended) A method according to Claim 65, wherein for each start date there are a maximum length of use and different shorter lengths of use, wherein said storing step may determine which of the shorter lengths of use can be determined by using derived from the maximum lengths of use and thereby only stores in the storage device availability information for the maximum length of use and the shorter lengths of use that are not derivable from the maximum length of use.

72. (currently amended) A method according to Claim 71, wherein if a price associated with a first shorter length of use is substantially equal to a price associated with the maximum length of use, then said storing step determines that the first shorter length of use can be determined using is derivable from the maximum length of use.

73. (currently amended) A system for providing product availability information to a user from at least one product source, where use of a product may begin be used on one of a plurality of different start dates and may be used for different lengths of time, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element:

accesses at least one product source and requests product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

stores the product availability information received from the product source in a storage device;

receives a product availability request from a user concerning a selected product;

accesses the information prestored in the storage device for the selected product; and

determines the availability of the selected product based on at least the availability information prestored in the storage device,

wherein said processing element only stores product availability information for a maximum number of lengths of use for each start date,

wherein when the length of use for a product exceeds a maximum length of use stored in the storage device, said system determines the availability by:

dividing the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in the storage device; and

determining the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

74. (canceled).

75. (currently amended) A system according to Claim 73 74, wherein said processing element divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use includes at least two days covers at least two dates.

76. (currently amended) A system according to Claim 73 74, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use say, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

77. (currently amended) A system according to Claim 73 74, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, said processing element using the following function to create the scenarios:

1) If LOS modulo  $x$  = 0

where

LOS = length of use of request

$x$  = maximum length of use stored in the cache

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Then

*Scenario 1 : A, B, C*

$$A = x / 2$$

$$B = \sum_{1}^{\text{int}(LOS-(x/2))/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 :*

$$= \sum_{1}^{\text{int}(LOS/x)} x$$

2) If LOS modulo  $x \neq 0$

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_{1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

78. (currently amended) A system according to Claim 73, wherein for each start date there are a maximum length of use and different shorter lengths of use, wherein said processing element determines which of the shorter lengths of use can be determined by using derived from the maximum lengths of use and thereby only stores in the storage device availability information for the maximum length of use and the shorter lengths of use that are not derivable from the maximum length of use.

79. (currently amended) A system according to Claim 78, wherein if a price associated with a first shorter length of use is substantially equal to a price associated with the maximum length of use, then said processing element determines that the first shorter length of use can be determined using is derivable from the maximum length of use.

80. (currently amended) A computer program product for providing product availability information to a user from at least one product source, where use of a product may begin be used on one of a plurality of different start dates and may be used for different lengths of time, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for receiving a product availability request from a user concerning a selected product;

fourth computer-readable program code means for accessing the information prestored in the storage device for the selected product; and

fifth computer-readable program code means for determining the availability of the selected product based on at least the availability information prestored in the storage device,

wherein said second computer-readable program code means only stores product availability information for a maximum number of lengths of use for each start date,

wherein when the length of use for a product exceeds a maximum length of use stored in the storage device, said fifth computer-readable code means:

divides the length of use requested by the user into at least two selected start dates and lengths of use that are each less than the maximum length of use stored in the storage device; and

determines the availability of the product for each selected start date and length of use to thereby determine the availability of the product for the requested start date and length of use.

81. (original) A computer program product according to Claim 80, wherein:

said third computer-readable program code means receives an availability request from a user concerning a product for a given start date and length of use;

    said fourth computer-readable program code means accesses the information prestored in the storage device for the selected product; and

    said fifth computer-readable program code means determines the availability of the product based on the selected start date and length of use from the availability information prestored in the storage device.

82. (canceled).

83. (currently amended) A computer program product according to Claim 81 82, wherein when the length of use for a product exceeds a maximum length of use stored in the storage device, wherein said fifth computer-readable program code means divides the requested start date and length of use into at least two selected start dates and lengths of use, wherein each selected length of use covers includes at least two days at least two dates.

84. (currently amended) A computer program product according to Claim 83, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use say, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

85. (currently amended) A computer program product according to Claim 81 82, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and have start dates and lengths of use that collectively correspond to the dates covered by the requested start date and length of use, said dividing step using the following function to create the scenarios:

- 1) If LOS modulo X = 0

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where

LOS = length of use of request

x X = maximum length of use stored in the cache  
Then

*Scenario 1 : A, B, C*

$$A = x / 2$$

$$B = \sum_{1}^{\text{int}(LOS-(x/2))/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 :*

$$= \sum_{1}^{\text{int}(LOS/x)} x$$

2) If LOS modulo x X > 0

Then

*Scenario 1 : A, B, C*

$$A = (x - 1)$$

$$B = \sum_{1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

*Scenario 2 : C, B, A*

86. (original) A method for providing product availability information to a user from at least two product sources, said method comprising:

accessing the at least two product sources and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product sources in a storage device;

determining the availability of a requested product by a user based on at least the availability information prestored in the storage device;

providing the user with availability information concerning the product from each product source;

accumulating the number of times that a product source's product relates to an availability request and the number of times that the product source had availability for the requested product;

dividing the number of times that the product source had availability for the requested product by the number of times that a product source's product related to an availability request to thereby determine a hit ratio;

comparing the hit ratio to a hit ratio threshold; and

updating the availability information stored in the storage device for product sources, wherein said updating step increases the number of times availability information is updated for a product source having a hit ratio that is less than or equal to the hit ratio threshold.

87. (original) A method according to Claim 86, wherein said updating step decreases the number of times availability information is updated for a product source having a hit ratio that is at least as great as the hit ratio threshold.

88. (original) A system for providing product availability information to a user from at least two product sources, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element:

accesses the at least two product sources and requests product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

stores the product availability information received from the product sources in a storage device;

determines the availability of a requested product by a user based on at least the availability information prestored in the storage device;

provides the user with availability information concerning the product from each product source;

accumulates the number of times that a product source's product relates to an availability request and the number of times that the product source had availability for the requested product;

divides the number of times that the product source had availability for the requested product by the number of times that a product source's product related to an availability request to thereby determine a hit ratio;

compares the hit ratio to a hit ratio threshold; and

updates the availability information stored in the storage device for product sources, wherein said updates step increases the number of times availability information is updated for a product source having a hit ratio that is less than or equal to the hit ratio threshold.

89. (original) A system according to Claim 88, wherein said processing element decreases the number of times availability information is updated for a product source having a hit ratio that is at least as great as the hit ratio threshold.